

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau(43) International Publication Date
31 December 2003 (31.12.2003)

PCT

(10) International Publication Number
WO 2004/002177 A1(51) International Patent Classification⁷: H04Q 7/30

(21) International Application Number:

PCT/IB2002/002459

(22) International Filing Date: 25 June 2002 (25.06.2002)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant (for all designated States except US): NOKIA
CORPORATION [FI/FI]; Keilalahdentie 4, FIN-02150
Espoo (FI).

(72) Inventors; and

(75) Inventors/Applicants (for US only): LLABRES, Francisca [ES/ES]; C/Turquesa, no. 3 (Cto. Alboran), casa 12, E-29631 Arroyo de la Miel (ES). LONGONI, Fabio [IT/ES]; Calle Manuel del Palacio, 6, E-29017 Malaga (ES).

(74) Agent: UNGERER, Olaf; Eisenführ, Speiser & Partner,
Arnulfstr. 25, 80335 Munich (DE).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.

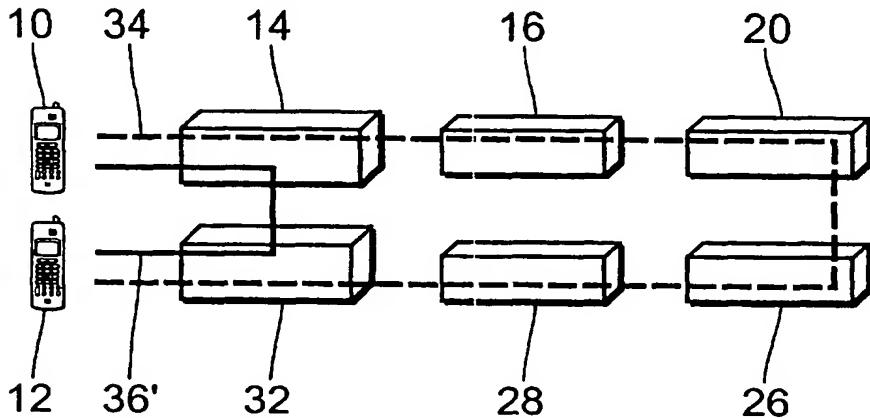
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ROUTING METHOD AND NETWORK ELEMENT



(57) Abstract: The present invention relates to a method and network system for direct routing of the user plane of a call between two (10, 12) network terminals attached to a first and a second access network (14; 32), respectively. After establishing the call, the transmission path for user data (36') is changed such that it only comprises the access networks. Relocation between access network elements for such a Direct Routed call is disclosed. The methods described are applicable for circuit-switched as well as packet-switched connection types and especially effective for all IP network situations. Furthermore, the invention relates to a network element, such as a Radio Network Controller (16; 28), adapted to operation according to the method mentioned above.

WO 2004/002177 A1

INTERNATIONAL SEARCH REPORT

International Application No
PCT/IB 02/02459

| | | |
|---|---|--|
| A. CLASSIFICATION OF SUBJECT MATTER IPC 7 H04Q7/30 | | |
| According to International Patent Classification (IPC) or to both national classification and IPC | | |
| B. FIELDS SEARCHED | | |
| Minimum documentation searched (classification system followed by classification symbols) IPC 7 H04Q | | |
| Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched | | |
| Electronic data base consulted during the International search (name of data base and, where practical, search terms used) WPI Data, EPO-Internal | | |
| C. DOCUMENTS CONSIDERED TO BE RELEVANT | | |
| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| X | US 2002/015392 A1 (LINDEN LARS ET AL) 7 February 2002 (2002-02-07) abstract paragraph '0004! paragraph '0010! paragraph '0012! - paragraph '0016! paragraph '0022! - paragraph '0036! paragraph '0038! figures 3-6B | 1-49 |
| X | EP 0 797 319 A (TRW INC) 24 September 1997 (1997-09-24) abstract figure 1 | 1 |
| A | EP 1 172 977 A (KONINKL KPN NV) 16 January 2002 (2002-01-16) abstract | 1 |
| | | -/- |
| <input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. | | <input checked="" type="checkbox"/> Patent family members are listed in annex. |
| * Special categories of cited documents : | | |
| *A* document defining the general state of the art which is not considered to be of particular relevance | | |
| *E* earlier document but published on or after the International filing date | | |
| *L* document which may throw doubts on priority, claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) | | |
| *O* document referring to an oral disclosure, use, exhibition or other means | | |
| *P* document published prior to the International filing date but later than the priority date claimed | | |
| Date of the actual completion of the International search | | Date of mailing of the International search report |
| 5 February 2003 | | 21/02/2003 |
| Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax (+31-70) 340-3016 | | Authorized officer Aguilar Cabarrus, E |

INTERNATIONAL SEARCH REPORT

Internat'l Application No
PCT/IB 02/02459

| C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT | | |
|--|---|-----------------------|
| Category | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| A | WO 02 03725 A (HAUMONT SERGE ;HILLO JARMO (FI); HURTTA TUIJA (FI); NOKIA CORP (FI) 10 January 2002 (2002-01-10) abstract figure 1 ----- | 1,21 |
| A | EP 0 848 527 A (AT & T CORP) 17 June 1998 (1998-06-17) abstract figure 1 ----- | 1 |

INTERNATIONAL SEARCH REPORT

Information on patent family members

Internat'l Application No
PCT/IB 02/02459

| Patent document cited in search report | | Publication date | | Patent family member(s) | Publication date |
|--|----|------------------|----------------------|---|--|
| US 2002015392 | A1 | 07-02-2002 | AU EP WO | 2899901 A 1234461 A1 0156315 A1 | 07-08-2001 28-08-2002 02-08-2001 |
| EP 0797319 | A | 24-09-1997 | US EP | 5930708 A 0797319 A2 | 27-07-1999 24-09-1997 |
| EP 1172977 | A | 16-01-2002 | EP AU WO | 1172977 A1 7973601 A 0207398 A1 | 16-01-2002 30-01-2002 24-01-2002 |
| WO 0203725 | A | 10-01-2002 | WO AU | 0203725 A1 5981800 A | 10-01-2002 14-01-2002 |
| EP 0848527 | A | 17-06-1998 | US CA EP JP | 5905872 A 2216266 A1 0848527 A1 10150470 A | 18-05-1999 05-05-1998 17-06-1998 02-06-1998 |